

NOVADAN®	SAFETY DATA SHEET	NOVADAN®
Triodan Extra		

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Date issued	14.06.2012
Revision date	16.11.2020

1.1. Product identifier

Product name	Triodan Extra
UFI	63R0-J0WY-S00Y-S4W5
Article no.	12298, 12299, 12612, 12613, 12623

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / preparation	Alkaline CIP cleaning agent.
Main intended use	PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)
Relevant identified uses	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU4 Manufacture of food products PC35 Washing and cleaning products (including solvent based products) PROC2 Use in closed, continuous process with occasional controlled exposure ERC8A Wide dispersive indoor use of processing aids in open systems
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Producer

Company name	Novadan ApS
Postal address	Platinvej 21
Postcode	DK-6000
City	Kolding
Country	Danmark
Telephone number	+ 45 76 34 84 00
Fax	+ 45 75 50 43 70
Email	sds@novadan.dk

Website www.novadan.dk

1.4. Emergency telephone number

Emergency telephone

Description: UK: NHS: 111
EI: National Poisons Information Centre, 24/7: 01 809 2166

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]

Skin Corr. 1A; H314; Calculation method

Eye Dam. 1; H318; Calculation method

Substance / mixture hazardous properties

For further information, please refer to section 11.

Additional information on classification

The informations stated in this MSDS, applies for the concentrated product. See Sec. 16, for informations regarding recommended user solutions

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label

Sodium hydroxide, Potassium Hydroxide

Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective gloves / protective clothing / eye protection / face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.

2.3. Other hazards

Health effect

Corrosive to skin and eyes. May cause permanent damage to the eyes, especially if the product is not washed away IMMEDIATELY. See section 11 for additional information on health hazards.

Environmental effects

Substantial amounts of the product may lead to a local change in acidity in small water systems which may have adverse effects on aquatic organisms. This product does not contain any PBT or vPvB substances.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
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Sodium hydroxide	CAS No.: 1310-73-2 EC No.: 215-185-5 REACH Reg. No.: 01-2119457892-27-xxxx	Skin Corr. 1A; H314 Eye Dam. 1; H318 Met. Corr. 1; H290 Additional information on classification: Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %	15 – 30 %
Potassium Hydroxide	CAS No.: 1310-58-3 EC No.: 215-181-3 Index No.: 019-002-00-8 REACH Reg. No.: 01-2119487136-33-xxxx	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 Additional information on classification: Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %	1 – 5 %
Tetrasodium-EDTA	CAS No.: 64-02-8 EC No.: 200-573-9 REACH Reg. No.: 01-2119486762-27-0000	Acute tox. 4; H302 Acute tox. 4; H332 Eye Dam. 1; H318 STOT RE2; H373	1 – 5 %
Substance comments	Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents: <5%: tetrasodium-EDTA . The full text for all hazard statements is displayed in section 16.		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Remove affected person from source of contamination.
Inhalation	Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.
Skin contact	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if any discomfort continues.
Eye contact	Important! Immediately rinse with water for at least 15 minutes. May cause permanent damage if eye is not immediately irrigated. Make sure to remove any contact lenses from the eyes before rinsing. Immediately transport to hospital or eye specialist. Continue flushing during transport to hospital.
Ingestion	Immediately rinse mouth and drink plenty of water. Call an ambulance. Bring along these instructions. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Do not give

	victim anything to drink if he is unconscious.
Recommended personal protective equipment for first aid responders	Wear necessary protective equipment. For personal protection, see section 8.

4.2. Most important symptoms and effects, both acute and delayed

Acute symptoms and effects	Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative.
Delayed symptoms and effects	The etching penetrates deeply into the tissue and is first noticed after a while.

4.3. Indication of any immediate medical attention and special treatment needed

Other information	In case of unconsciousness, ingestion or eye contact: Immediately call a doctor / ambulance. Show this safety data sheet.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	This product is not flammable. During fire, gases hazardous to health may be formed. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.
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5.3. Advice for firefighters

Personal protective equipment	Wear necessary protective equipment. For personal protection, see section 8.
Fire fighting procedures	Reference is made to the company fire procedure. If risk of water pollution occurs, notify appropriate authorities. Avoid breathing fire vapours.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Look out! The product is corrosive. Use protective gloves, goggles and suitable protective clothing. In case of inadequate ventilation use suitable respirator. For personal protection, see section 8.
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6.2. Environmental precautions

Environmental precautionary measures	Avoid discharge into water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Dam and absorb spillage with sand, sawdust or other absorbent. Wash contaminated area with water.
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6.4. Reference to other sections

Other instructions

See section 8 and section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling

Avoid spilling, skin and eye contact. Use work methods which minimize spreading of vapours, dust, smoke, aerosols, splashes etc. to the extent technically possible. Do not mix with acidic products.

Protective safety measures

Advice on general occupational hygiene

Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

Eating, smoking and water fountains prohibited in immediate work area.

Take off contaminated clothing and personal protective equipment before entering an eating area..

7.2. Conditions for safe storage, including any incompatibilities

Storage

Store in tightly closed original container. Keep away from food, drink and animal feeding stuffs. Store protected from acids. Store the product away from direct sunlight in opaque containers.

Conditions for safe storage

Storage temperature

Value: -20 – 35 °C

Storage stability

Durability: 36 months.

7.3. Specific end use(s)

Specific use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Sodium hydroxide	CAS No.: 1310-73-2	Limit value (short term) Value: 2 mg/m ³	
Potassium Hydroxide	CAS No.: 1310-58-3	Limit value (short term) Value: 2 mg/m ³	

DNEL / PNEC

Substance

Sodium hydroxide

DNEL

Group: Professional**Route of exposure:** Long-term inhalation (local)**Value:** 1 mg/m³**Group:** Consumer**Route of exposure:** Long-term inhalation (local)

	<p>Value: 1 mg/m³</p> <p>Group: Professional Route of exposure: Acute dermal (local) Value: 2 %</p> <p>Group: Consumer Route of exposure: Acute dermal (local) Value: 2 %</p>
Substance	Potassium Hydroxide
DNEL	<p>Group: Consumer Route of exposure: Lang sigt (gentages) – Indånding – Lokal effekt Value: 1 mg/m³</p> <p>Group: Professional Route of exposure: Lang sigt (gentages) – Indånding – Lokal effekt Value: 1 mg/m³</p>
Substance	Tetrasodium-EDTA
DNEL	<p>Group: Consumer Route of exposure: Short term (acute) – Inhalation – Local effect Value: 1,5 mg/m³</p> <p>Group: Worker Route of exposure: Long term (repeated) – Inhalation – Local effect Value: 2,5 mg/m³</p> <p>Group: Worker Route of exposure: Short term (acute) – Inhalation – Local effect Value: 2,5 mg/m³</p> <p>Group: Consumer Route of exposure: Long term (repeated) – Inhalation – Local effect Value: 1,5 mg/m³</p>
PNEC	<p>Route of exposure: Saltwater Value: 0,22 mg/l</p> <p>Route of exposure: Sewage treatment plant STP Value: 43 mg/l</p> <p>Route of exposure: Soil Value: 0,72 mg/kg</p> <p>Route of exposure: Water Value: 2,2 mg/l</p> <p>Value: 1,2 mg/l Reference: Intermittent release</p>

8.2. Exposure controls

Safety signs



Precautionary measures to prevent exposure

Technical measures to prevent exposure

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Provide eyewash, quick drench.

Eye / face protection

Suitable eye protection

Wear approved safety goggles. EN 166.

Hand protection

Skin- / hand protection, long term contact

Use protective gloves made of:
Butyl rubber. $\geq 0,5$ mm
Neoprene. $\geq 0,5$ mm
Nitrile. $\geq 0,4$ mm
EN 374.

Breakthrough time

Value: ≥ 480 minute(s)

Hand protection, comments

Manufacturer's directions for use should be observed because of great diversity of types.
The recommendation is a qualified estimate based on knowledge of the components.

Skin protection

Additional skin protection measures

Wear apron or protective clothing in case of splashes. Wear rubber footwear.

Respiratory protection

Respiratory protection necessary at

Under normal conditions of use respiration protection should not be required.

Thermal hazards

Thermal hazards

See section 5.

Appropriate environmental exposure control

Environmental exposure controls

See section 6.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Fluid.

Colour	Colourless to pale yellow.
Odour	No data recorded.
Odour limit	Comments: No data recorded.
pH	Status: In delivery state Value: > 13,0 Status: In aqueous solution Value: ~ 12,5 Comments: 15°dH Concentration: 0,5 %
Melting point / melting range	Comments: Not relevant.
Boiling point / boiling range	Comments: Not relevant.
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not relevant.
Flammability	Not relevant.
Explosion limit	Comments: Not relevant.
Vapour pressure	Comments: Not relevant.
Vapour density	Comments: Not relevant.
Bulk density	Value: ~ 1,30 kg/l
Solubility	Comments: Completely soluble in water.
Partition coefficient: n-octanol/ water	Comments: No data recorded.
Auto-ignition temperature	Comments: Not relevant.
Decomposition temperature	Comments: Not relevant.
Viscosity	Value: < 50 mPa s
Explosive properties	Not explosive.
Oxidising properties	Does not meet the criteria for oxidising.

9.2. Other information

Other physical and chemical properties

Comments No data recorded.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts violently with strong acids. Do not add water directly to the product. It may cause a violent reaction. Risk of bumping (splashes).
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10.4. Conditions to avoid

Conditions to avoid	Heating. Extremes of temperatures. Avoid contact with acids.
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10.5. Incompatible materials

Materials to avoid	Strong acids. Acids, oxidising. Alkali-sensitive metals such as aluminium, tin, lead and zinc and alloys with these metals.
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10.6. Hazardous decomposition products

Hazardous decomposition products	In case of fire, toxic gases (CO, CO ₂ , NO _x) may be formed.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance	Potassium Hydroxide
Acute toxicity	Effect tested: LD50 Route of exposure: Oral Value: 333 mg/kg Animal test species: Rat Test reference: OECD 425
Substance	Tetrasodium-EDTA
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: 1000-2000 mg/kg Animal test species: Rat Comments: BASF-test Type of toxicity: Acute Effect tested: LC50 Route of exposure: Inhalation. Duration: 6 h Value: 1000-5000 mg/m ³ Animal test species: Rat Comments: OECD Guideline 403
Other toxicological data	Toxicological tests on the product has not been performed.

Other information regarding health hazards

Assessment of acute toxicity, classification	No evidence for acute toxicity.
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Substance	Sodium hydroxide
Skin corrosion / irritation test result	Evaluation result: Corrosive to skin.

Substance	Sodium hydroxide
Eye damage or irritation, test results	Evaluation result: Result: Corrosive to eyes.
General	Corrosive to skin and eyes.
Inhalation	Aerosols may be corrosive.
Skin contact	Strongly corrosive. May cause deep tissue damage.
Eye contact	Strongly corrosive. Causes severe burns. Immediate first aid is imperative. May cause permanent damage to the eyes, especially if the product is not washed away IMMEDIATELY.
Ingestion	Strongly corrosive. Even small amounts may be fatal. Symptoms are severe burning pains in mouth, throat and stomach.
Sensitisation	No evidence for respiratory nor skin sensitization.
Assessment of germ cell mutagenicity, classification	No evidence for germ cell mutagenicity.
Assessment of carcinogenicity, classification	No evidence for carcinogenicity.
Assessment of reproductive toxicity, classification	No evidence for reproductive toxicity.
Assessment of specific target organ toxicity - single exposure, classification	No evidence for STOT-single exposure.
Assessment of specific target organ toxicity - repeated exposure, classification	No evidence for STOT-repeated exposure.
Assessment of aspiration hazard, classification	No evidence for aspiration hazard.

Symptoms of exposure

Symptoms of overexposure	No specific symptoms noted.
Endocrine disruption	No evidence for endocrine disrupting properties.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Sodium hydroxide
Aquatic toxicity, fish	Toxicity type: Acute Value: 35 – 189 mg/l Exposure time: 96 hour(s) Method: LC50
Substance	Potassium Hydroxide
Aquatic toxicity, fish	Value: 80 mg/l Test duration: 96 hour(s) Species: GAMBUSIA AFFINIS Method: LC50
Substance	Tetrasodium-EDTA

Aquatic toxicity, fish	Value: > 100 mg/l Test duration: 96 h Species: Lepomis macrochirus Method: LC50
Substance	Sodium hydroxide
Aquatic toxicity, crustacean	Toxicity type: Acute Value: 40,4 mg/l Test duration: 48 hour(s) Species: ceriodaphnia sp. Method: EC50
Substance	Tetrasodium-EDTA
Aquatic toxicity, crustacean	Value: > 100 mg/l Test duration: 48 h Species: Daphnia magna Method: EC50
Ecotoxicity	Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	The product is easily biodegradable.
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12.3. Bioaccumulative potential

Substance	Tetrasodium-EDTA
Bioconcentration factor (BCF)	Value: ~ 1,8
Bioaccumulation, evaluation	The product is not bioaccumulating.

12.4. Mobility in soil

Mobility	The product is water soluble and may spread in water systems.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	Not Classified as PBT/vPvB by current EU criteria.
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12.6. Other adverse effects

Potential endocrine disruptor	Comments: No evidence for endocrine disrupting properties.
Additional ecological information	For this product no classification is required for environmental hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point. Dispose of waste and residues in accordance with local authority requirements. -
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Appropriate methods of disposal for the contaminated packaging	Dispose unused product and the packaging in accordance with local requirements.
EWC waste code	EWC waste code: 0706 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics Classified as hazardous waste: Yes
EWL packing	EWC waste code: 0706 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics Classified as hazardous waste: Yes
Other information	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste code applies to product remnants in pure form.

SECTION 14: Transport information

Dangerous goods Yes

14.1. UN number

ADR/RID/ADN 1719

IMDG 1719

ICAO/IATA 1719

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN CAUSTIC ALKALI LIQUID, N.O.S.

Technical name/Danger releasing substance English ADR/RID/ADN Sodium hydroxide, Potassium hydroxide

ADR/RID/ADN CAUSTIC ALKALI LIQUID, N.O.S.

Technical name/danger releasing substance ADR/RID/ADN Sodium hydroxide, Potassium Hydroxide

IMDG CAUSTIC ALKALI LIQUID, N.O.S.

Technical name/danger releasing substance IMDG Sodium hydroxide, Potassium hydroxide

ICAO/IATA CAUSTIC ALKALI LIQUID, N.O.S.

Technical name/danger releasing substance ICAO/IATA Sodium hydroxide, Potassium hydroxide

14.3. Transport hazard class(es)

ADR/RID/ADN 8

Classification code ADR/RID/ADN C5

IMDG 8

ICAO/IATA 8

14.4. Packing group

ADR/RID/ADN II

IMDG	II
ICAO/IATA	II

14.5. Environmental hazards

IMDG Marine pollutant	No
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14.6. Special precautions for user

Special safety precautions for user	Not relevant.
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14.7. Maritime transport in bulk according to IMO instruments

Product name	CAUSTIC ALKALI LIQUID, N.O.S.
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Additional information

Hazard label ADR/RID/ADN	8
Hazard label IMDG	8
Hazard label ICAO/IATA	8

ADR/RID Other information

Tunnel restriction code	E
Transport category	2
Hazard No.	80

IMDG Other information

EmS	F-A, S-B
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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

Other label information	For professional users only. As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.
Legislation and regulations	The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242), with amendments. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF

THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents.

15.2. Chemical safety assessment

Chemical safety assessment performed No

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H332 Harmful if inhaled. H373 May cause damage to organs through prolonged or repeated exposure
Training advice	No particular training or education is required but the user must be familiar with this SDS. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.
Additional information	READY-TO-USE MIXTURE: 0,5 % H314 Causes severe skin burns and eye damage.
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	2
Prepared by	ALM